SCHEMATIC DIAGRAMS
MOD'S

H 1000 & H 2000

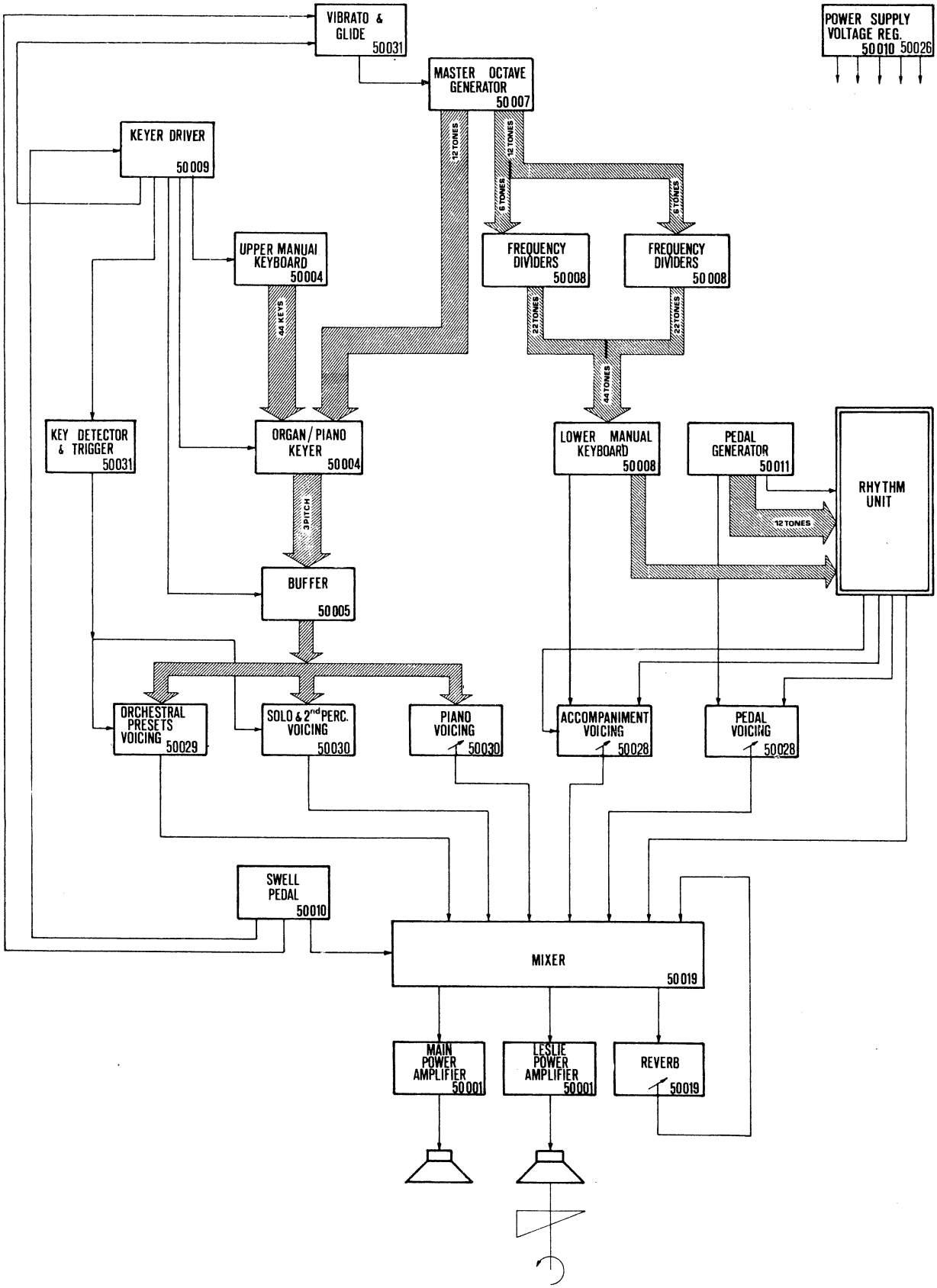
ELECTRONIC ORGANS

GEM® A PRODUCT OF

general electro music

MONDAINO · FO · ITALY

H1000/2000



ISSUED	DATE	BY
DRAWN	13-5-80	
CKD	13-5-80	
APPRVD		

USED ON:

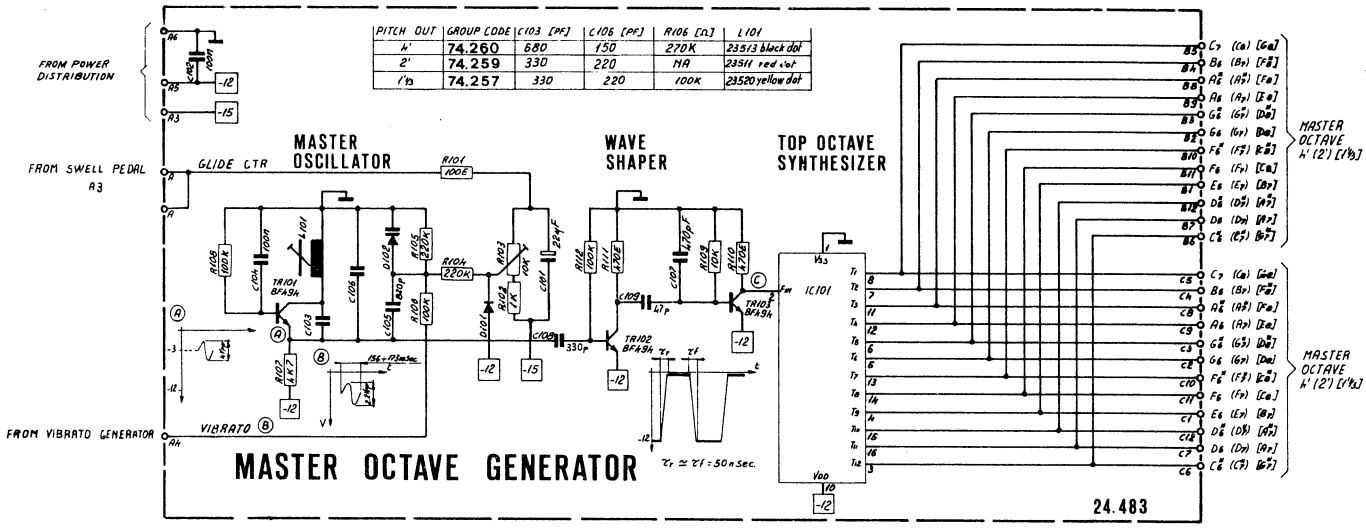
DDR MONDAINO (FO)

N°. 50016

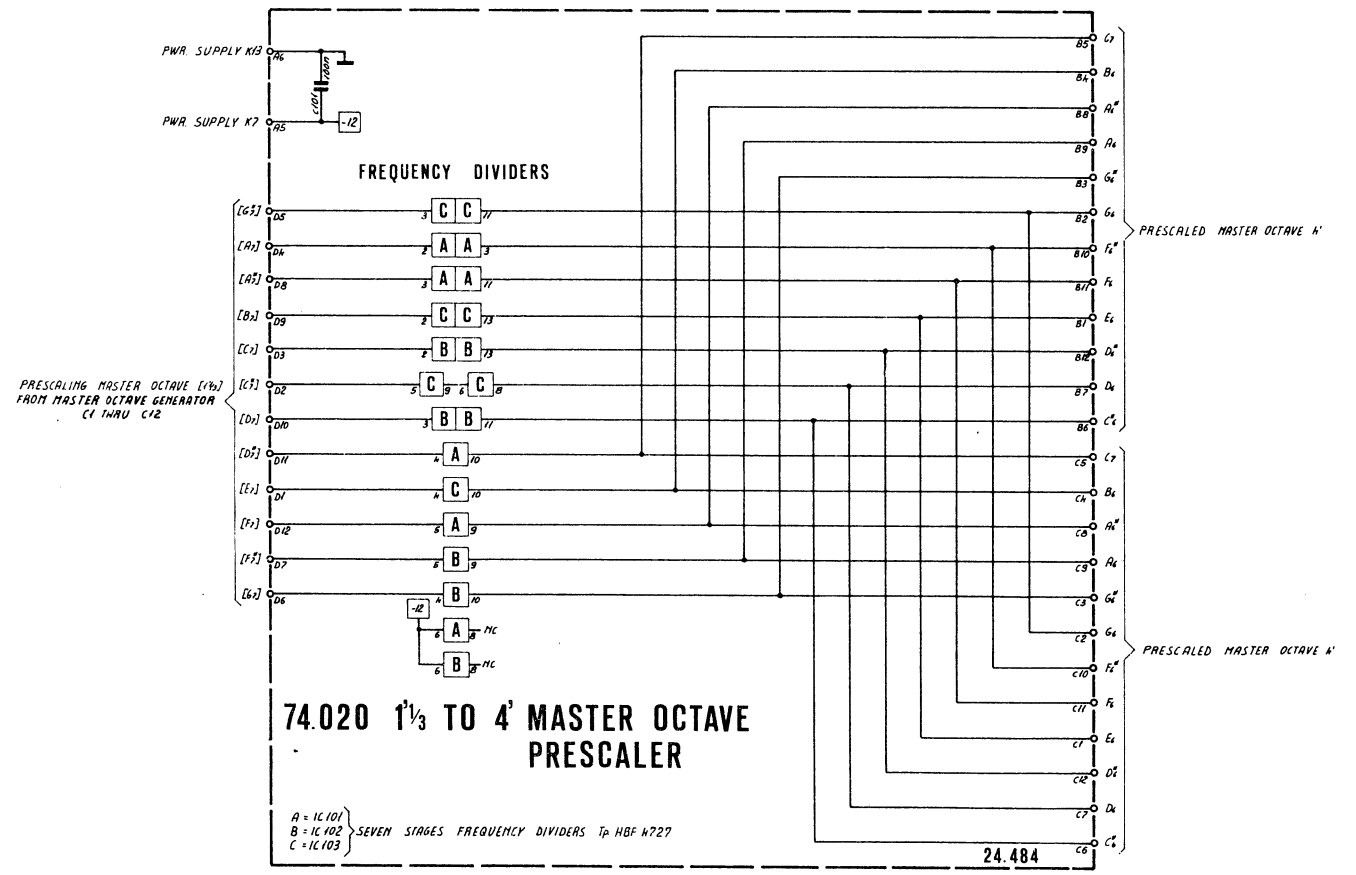
REPLACED BY

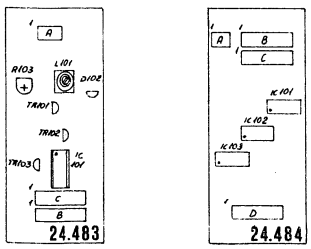
REPLACING

SCHEMATIC DIAGRAM:
BLOCK DIAGRAM



PITCH OUT	GROUP CODE	C103 [pF]	C106 [pF]	R106 [Ω]	L101
4'	74.260	680	150	270K	23513 black dot
2'	74.259	330	220	NA	23511 red dot
1'⅓	74.257	330	220	100K	23520 yellow dot


PWR. SUPPLY K13
PWR. SUPPLY K7
FREQUENCY DIVIDERS
PRESCALING MASTER OCTAVE [1'/3] FROM MASTER OCTAVE GENERATOR C1 THRU C12
PRESCALED MASTER OCTAVE 4'
PRESCALED MASTER OCTAVE 4'
74.020 1'⅓ TO 4' MASTER OCTAVE PRESCALER
A = IC 101
B = IC 102
C = IC 103
SEVEN STAGES FREQUENCY DIVIDERS Tp HBF 4727
24.484



NOTES: 1) ALL RESISTORS 1/4 W UNLESS OTHERWISE SPECIFIED
2) ALL REPORTED WAVEFORMS AS WIEVED WITH 10 MHz SCOPE WITH LOW CAPACITANCE PROBE

ISSUED	DATE	BY
DRAWN	6.5.80	
CKD	6.5.80	
APPRVD		

USED ON:

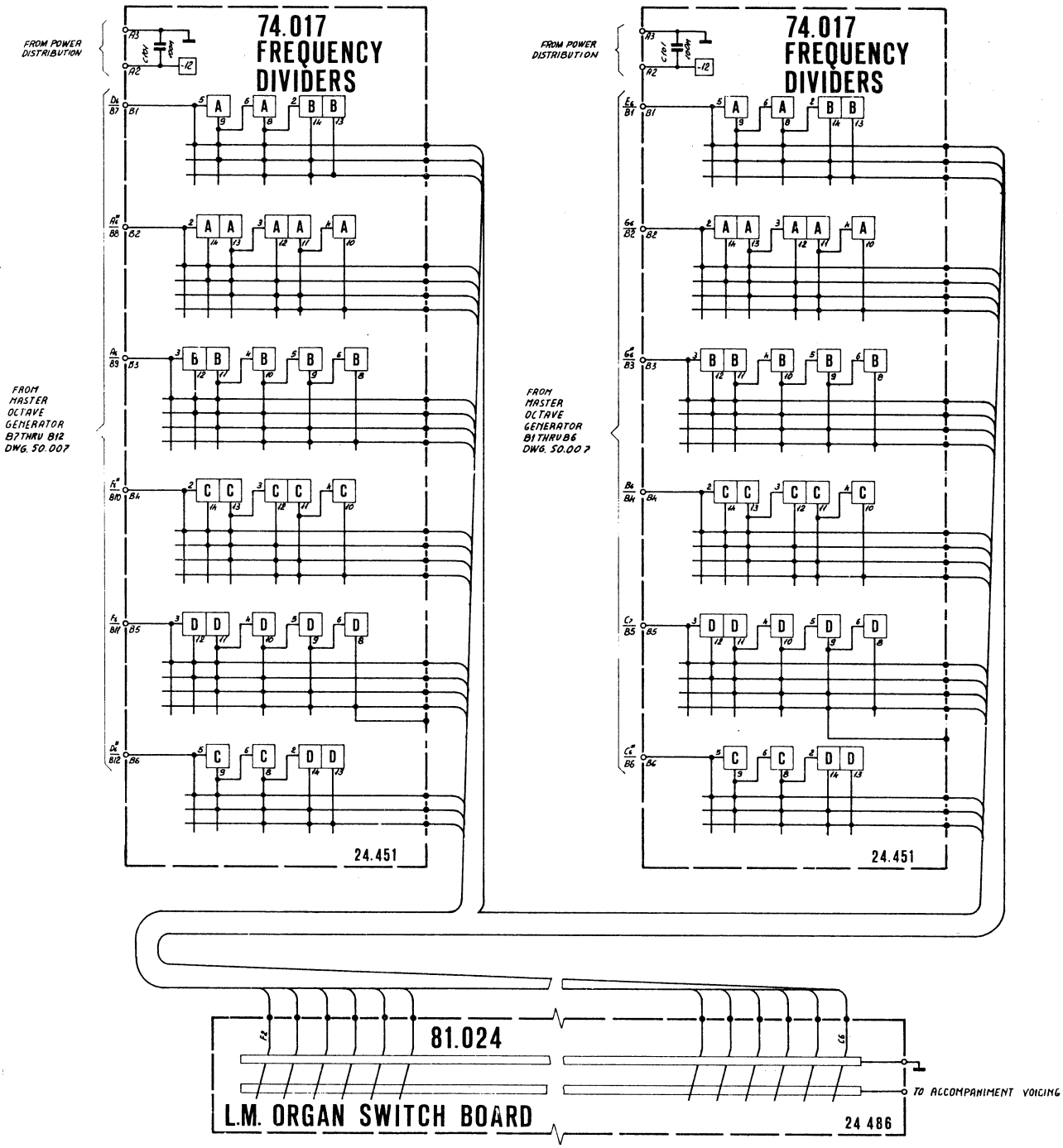
DDR MONDAINO (FO)

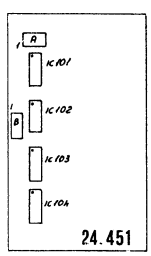
N°. 50 007

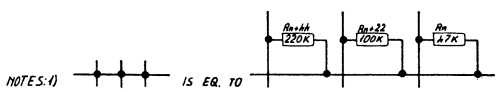
REPLACED DY

REPLACING

SCHEMATIC DIAGRAM:
MASTER OCTAVE GENERATOR & 1'⅓ TO 4' MASTER OCTAVE PESCALER







NOTES: 1) IS EQ. TO

2) ALL RESISTORS 1/4 WATT UNLESS OTHERWISE SPECIFIED

3) A, B, C, D ARE SEVEN STAGES FREQUENCY DIVIDERS Tp HBF 4727

REV.	SUBJECT	DATE	CKD
ISSUED	DATE	BY	USED ON:
DRAWN	6.5.80		
CKD	6.5.80		
APPRVD			

DDR MONDAINO (FO)

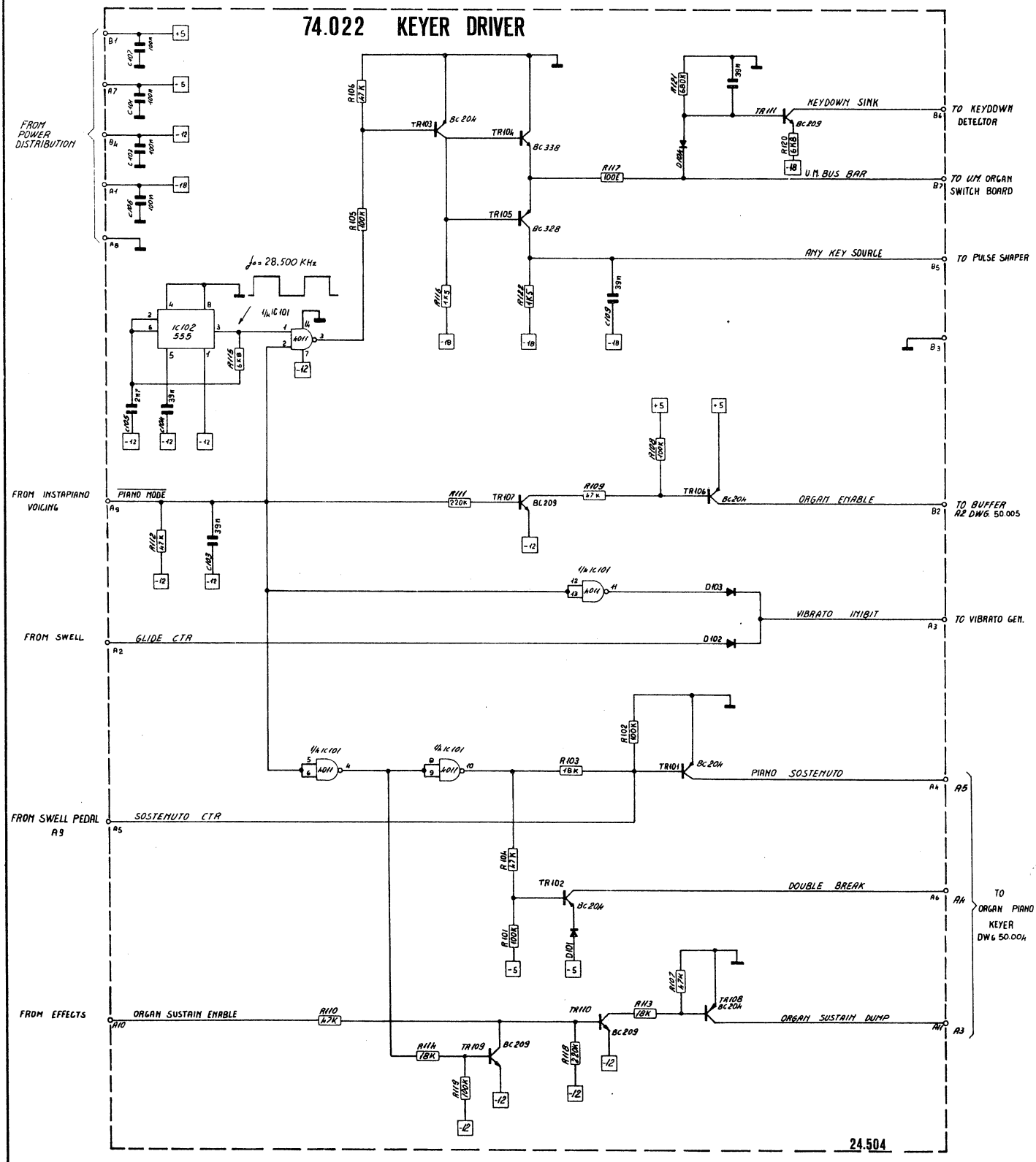
Nº. 50.008

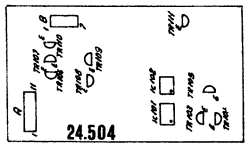
REPLACED DY

REPLACING

SCHEMATIC DIAGRAM:
LOWER MANUAL GENERATOR

74.022 KEYER DRIVER





NOTES
1) ALL RESISTORS 1/4 W UNLESS OTHERWISE SPECIFIED
2) ALL DIODES FDH 999 UNLESS OTHERWISE SPECIFIED
3) ALL VOLTAGES MEASURED WITH 20.000 OHM/V VOLTMETER WITH RESPECT TO GND WITHOUT SIGNAL

ISSUED	DATE	BY
DRAWN	6/5/80	
CKD	6/5/80	
APPRVD		

USED ON:

DDR MONDAINO (FO)

Nº. 50.009

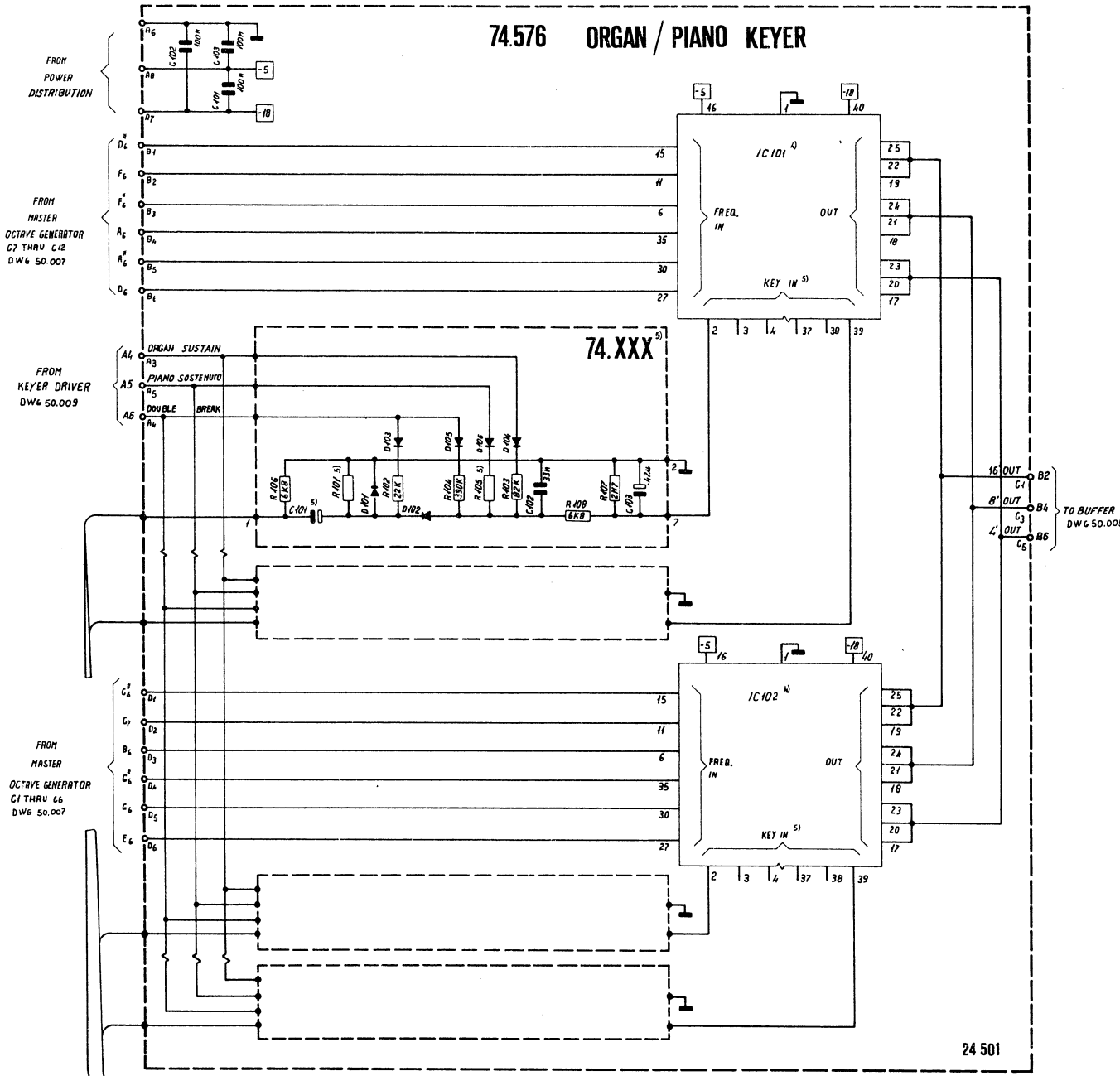
REPLACED BY

REPLACING

SCHEMATIC DIAGRAM:

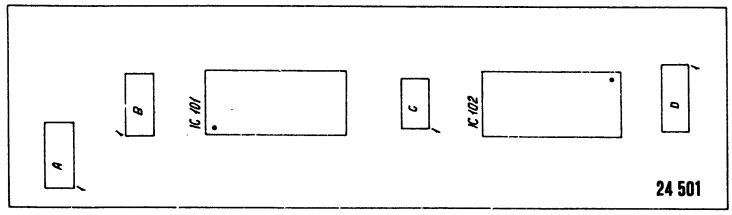
KEYER DRIVER

74.576 ORGAN / PIANO KEYER



KEYS V.S. IC 101/102 INTERCONNECTIONS

KEY	F2	F2#	G2	G2#	A2	A2#	B2	C3	C3#	D3	D3#	E3	F3	F3#	G3	G3#	A3	A3#	B3	C4	C4#	D4	D4#	E4	F4	F4#	G4	G4#	A4	A4#	B4	C5	C5#	D5	D5#	E6	F5	F5#	G5	G5#	A5	A5#	B5	C6
IC101 PIN	7	2				39	34				26	12		8	3			38	33			28	13		9	4				37	32				29	14		10	5				36	31	
IC102 PIN				34	39			2	7	12			26			33	38			3	8	13			28				32	37			4	9	14			29			31	36			5	10
C 101	10 µ																					6.8 µ												4.47											
R 101	330K																					680K												1M											
R 105	330K																					220K												220K											
PART CODE	74 573																					74 574												74 575											



NOTES: 1) ALL RESISTOR 1/4 W UNLESS OTHERWISE SPECIFIED
2) ALL DIODES FDH 999 UNLESS OTHERWISE SPECIFIED
3) ALL VOLTAGES MEASURED WITH 20.000 OHM/V VOLTMETER WITH RESPECT TO GND
4) CUSTOM DEVICE
5) SEE UNDER HEATH TABLE

ISSUED	DATE	BY
DRAWN	5-5-80	
CKD	5.5.80	
APPRVD		

USED ON:

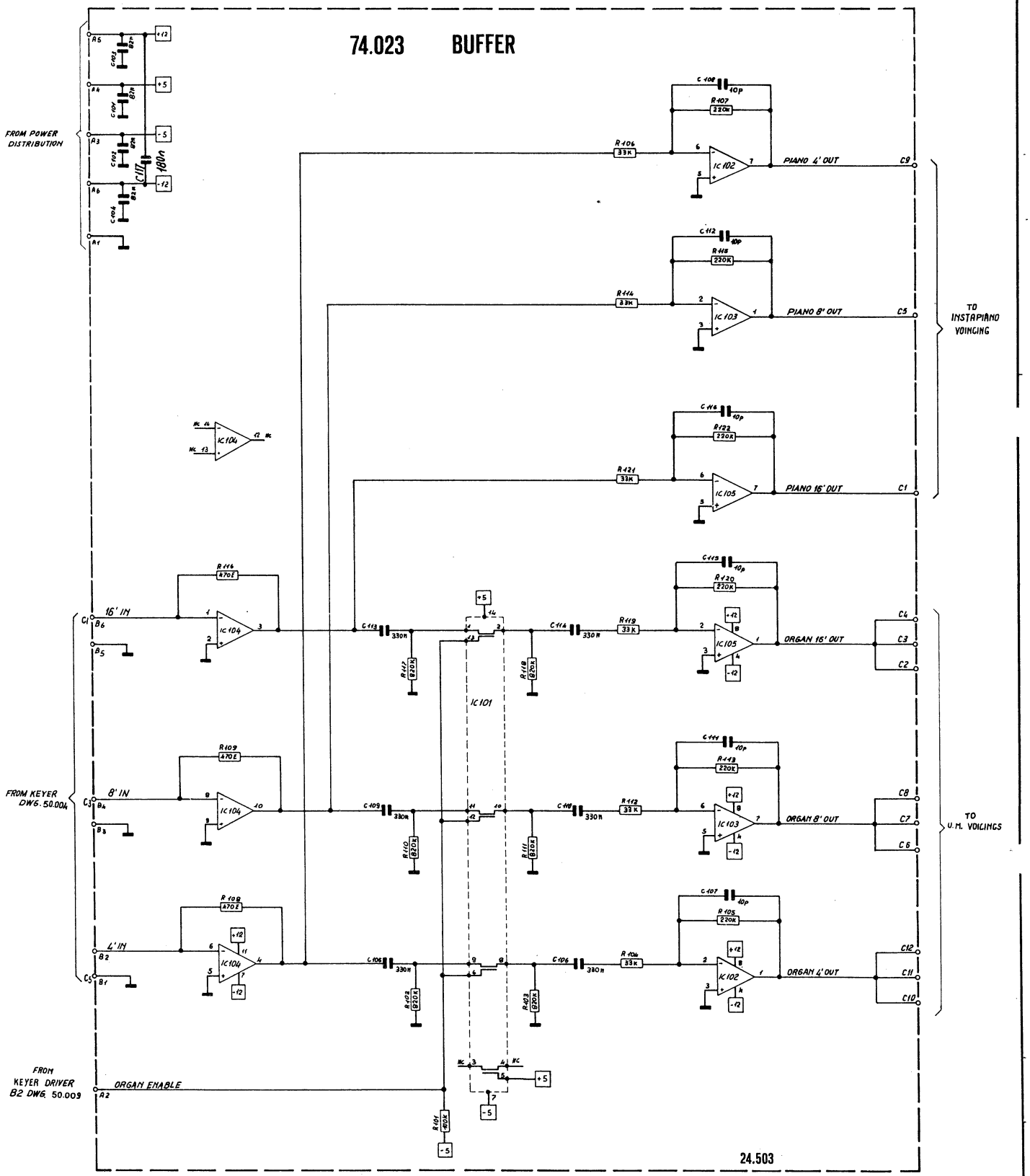
DDR MONDAINO (FO)

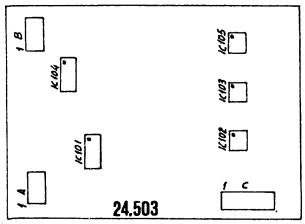
Nº. 50.004

REPLACED DY

REPLACING

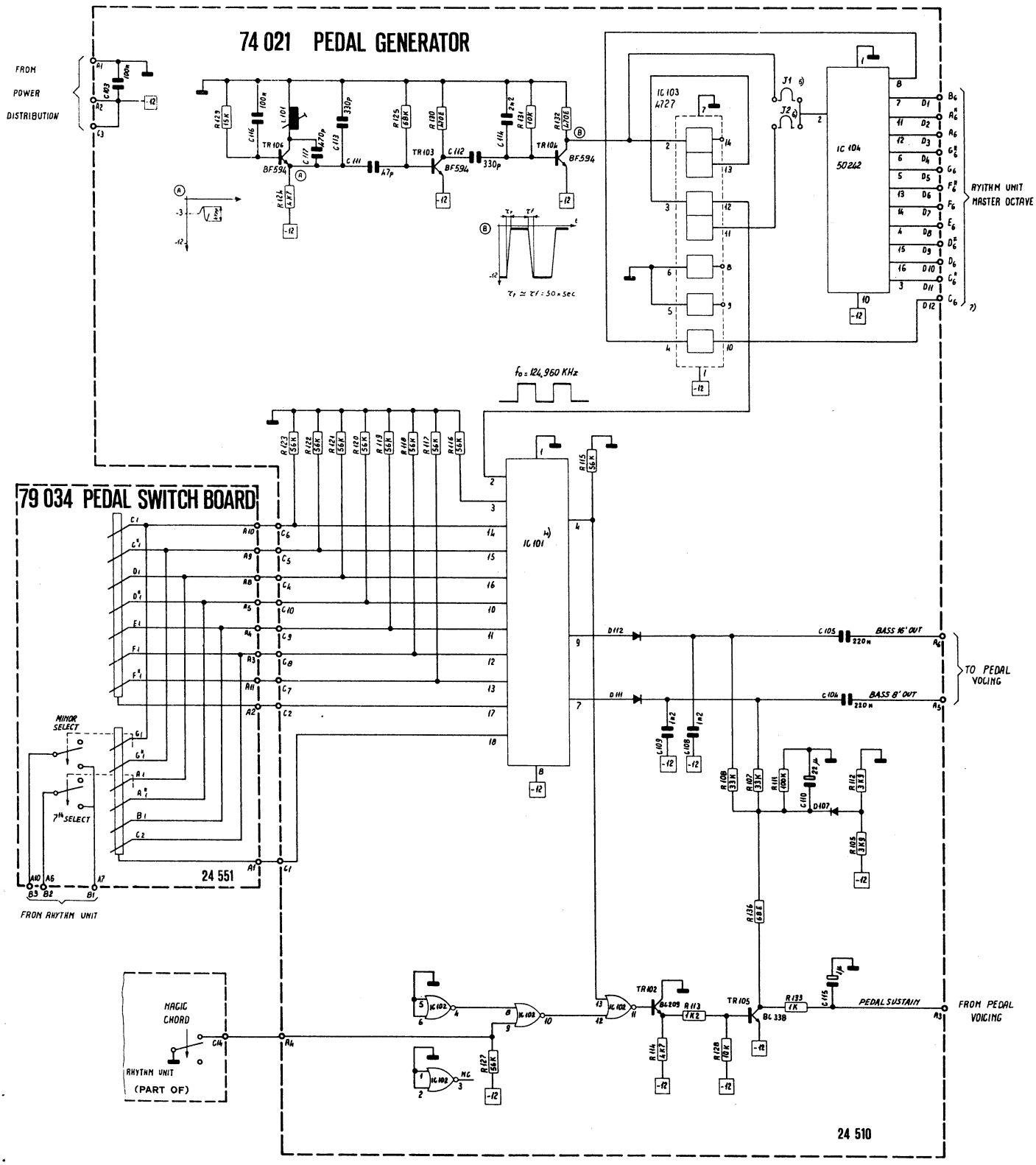
SCHEMATIC DIAGRAM: ORGAN / PIANO KEYER

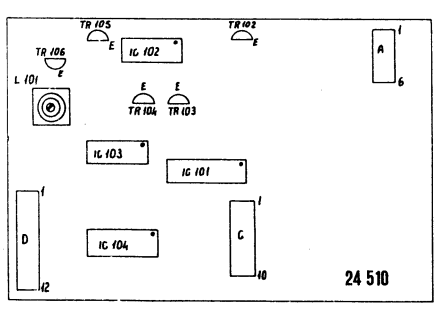




NOTES: 1) ALL RESISTORS ¼ W UNLESS OTHERWISE SPECIFIED
2) ALL VOLTAGES MEASURED WITH 20.000 OHM/V VOLTMETER WITH RESPECT TO GND WITHOUT SIGNAL

REV.	SUBJECT			DATE	CKD
ISSUED	DATE	BY	USED ON:	DDR MONDAINO (FO)	
DRAWN	6·5·80				
CKD	6·5·80				
APPRVD					
N° 50.005			SCHEMATIC DIAGRAM: BUFFER		
REPLACED DY					
REPLACING					





NOTES:
1) ALL RESISTORS 1/4W UNLESS OTHERWISE SPECIFIED
2) ALL DIODES FDH 999 UNLESS OTHERWISE SPECIFIED
3) ALL VOLTAGES MEASURED WITH 20.000 OHM/V METER WITHOUT SIGNAL WITH RESPECT TO GND
4) IC 101 : CUSTOM DEVICE
5) J1 : JUMPER 1 PRESETS PERFORMER II MASTER OCT.
6) J2 : JUMPER 2 PRESETS B/G BAND MASTER OCT.
7) C_x THRU B_x ; SUBSCRIPT REFER TO CORRECT OCTAVE LOCATION:
PERFORMER II x = 6 (J1 SEL.)
B/G BAND x = 2 (J2 SEL.)

ISSUED	DATE	BY
DRAWN	13-5-80	
CKD	13-5-80	
APPRVD		

USED ON:

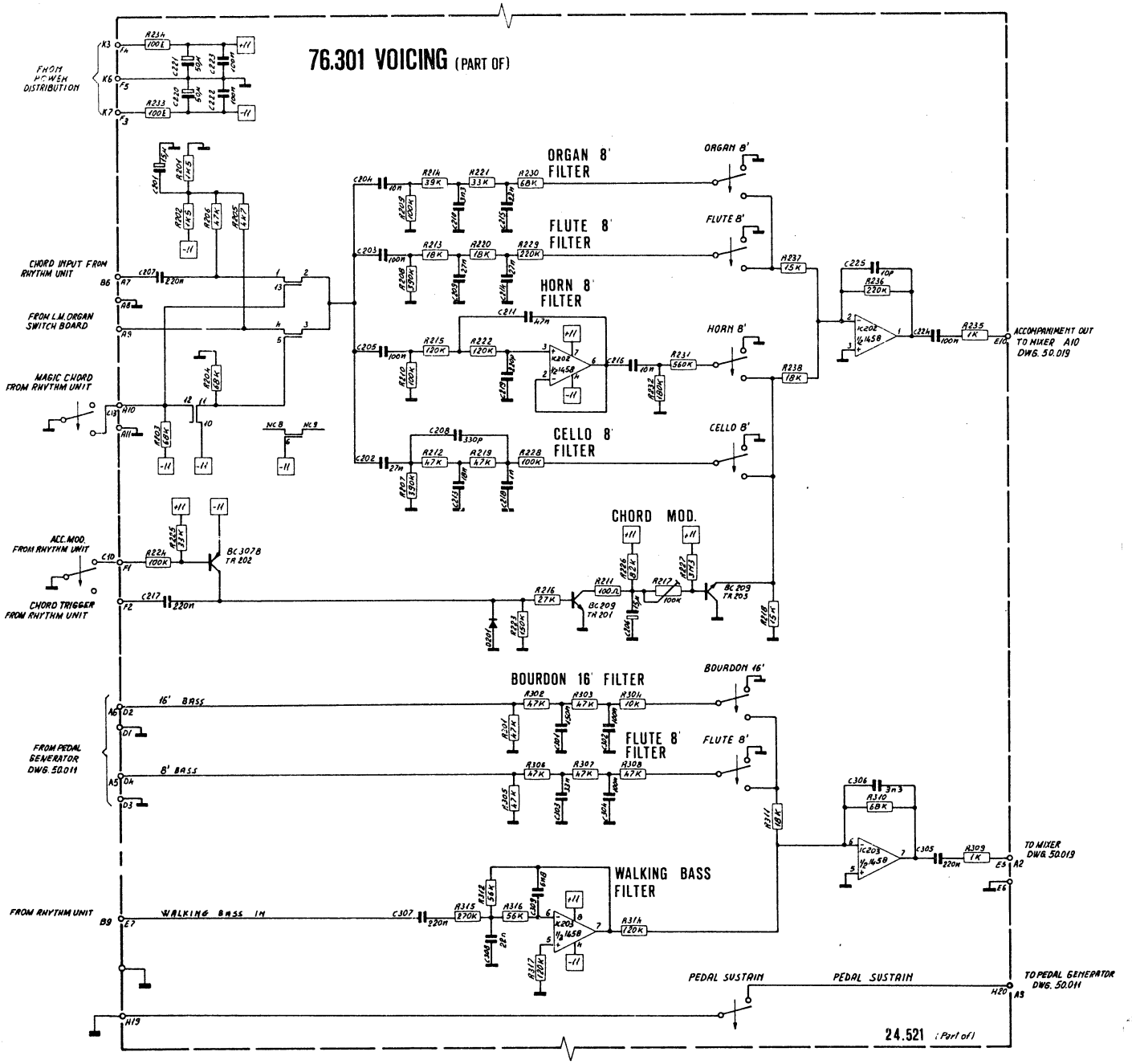
DDR MONDAINO (FO)

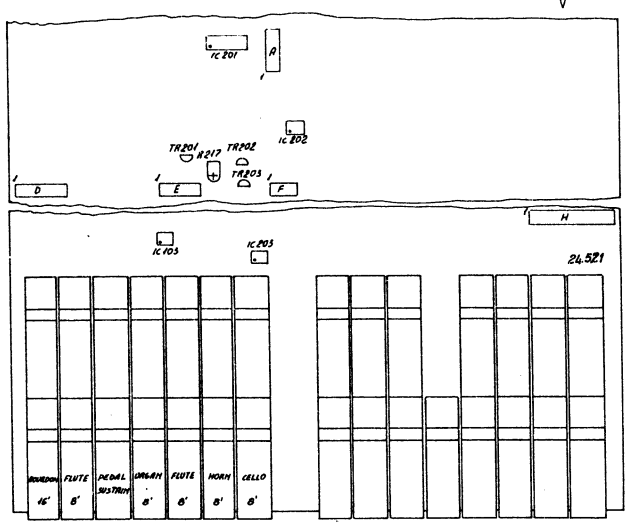
N°. 50011

REPLACED BY

REPLACING

SCHEMATIC DIAGRAM: PEDAL GENERATOR





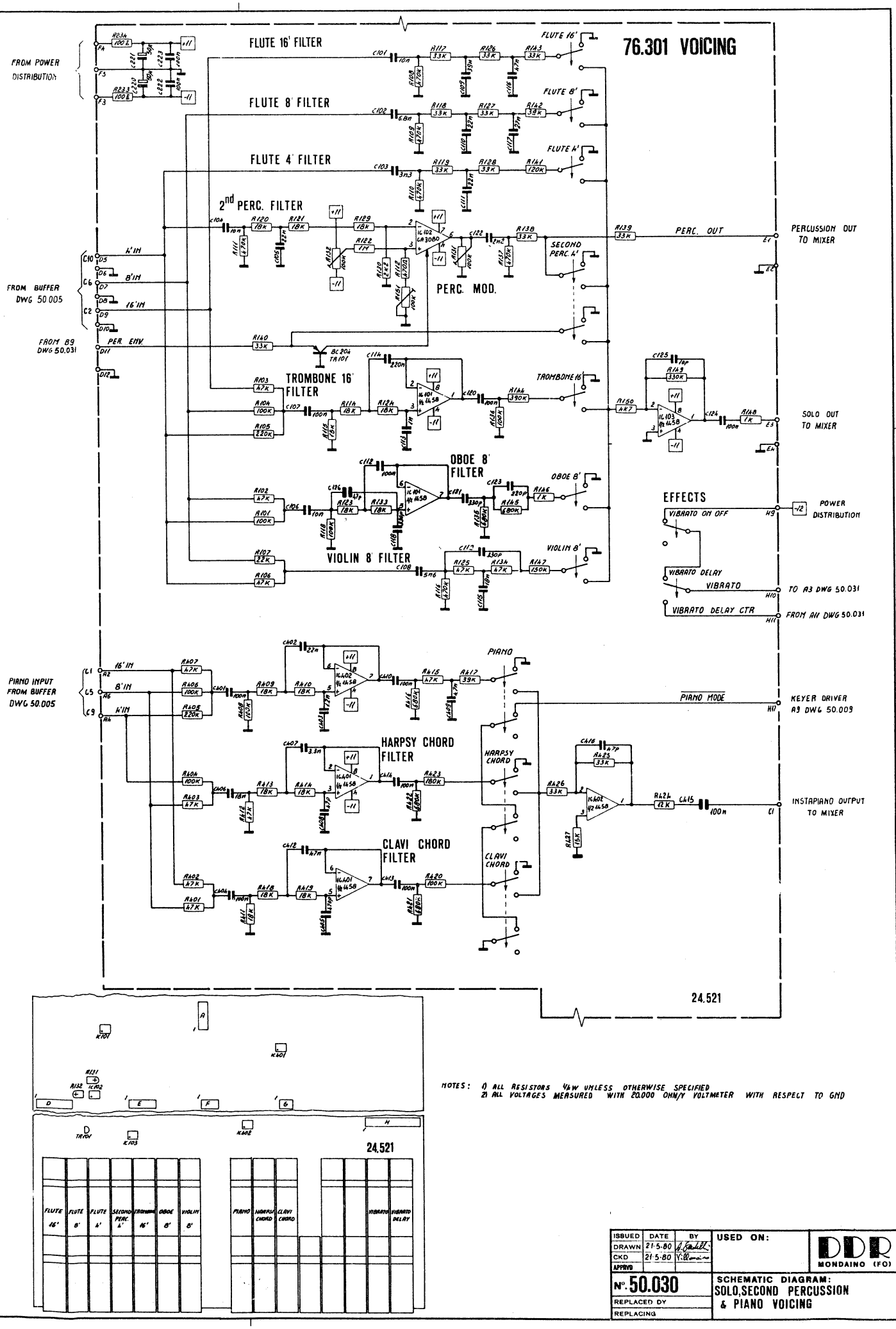
NOTES: 1) ALL RESISTORS 1/4 W UNLESS OTHERWISE SPECIFIED
2) ALL VOLTAGES MEASURED WITH 20000 OHM/VOLT METER WITH RESPECT TO GND
3) ALL DIODES FDH 999 UNLESS OTHERWISE SPECIFIED

ISSUED	DATE	BY
DRAWN	21-5-80	
CKD	21-5-80	
APPRVD		
N°. 50.028		
REPLACED BY		
REPLACING		

USED ON:

DDR MONDAINO (FO)

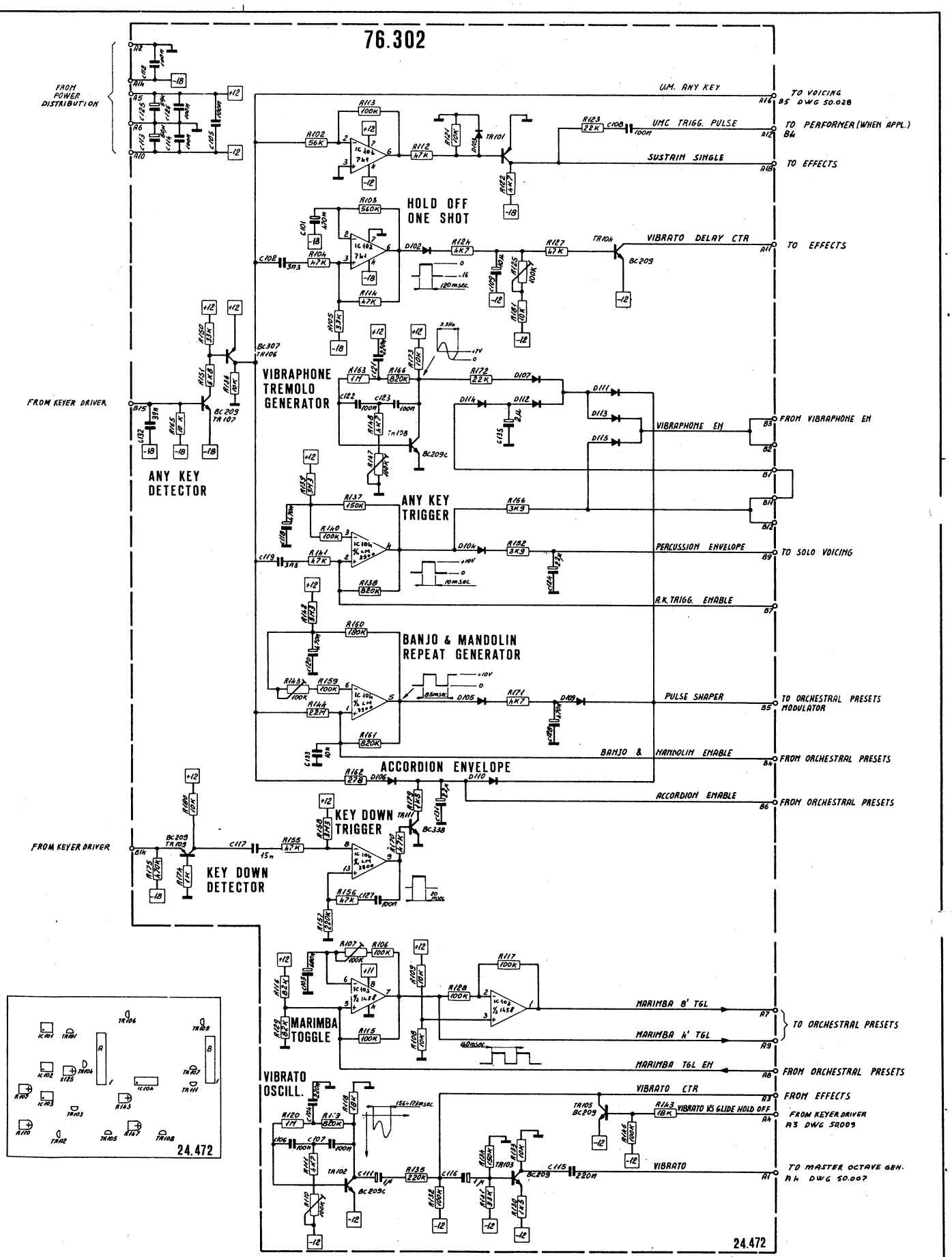
SCHEMATIC DIAGRAM:
ACCOMPANIMENT & PEDAL VOICING



NOTES: 1) ALL RESISTORS ¼W UNLESS OTHERWISE SPECIFIED
2) ALL VOLTAGES MEASURED WITH 20.000 OHM/V VOLTMETER WITH RESPECT TO GND

ISSUED	DATE	BY	USED ON:
DRAWN	21-5-80	A. Gabelli	
CKD	21-5-80	V. Mainino	
APPRVD			
Nº. 50.030			SCHEMATIC DIAGRAM: SOLO, SECOND PERCUSSION & PIANO VOICING
REPLACED BY			
REPLACING			

DDR MONDAINO (FO)



NOTES: 1) ALL VOLTAGES MEASURED WITH 20.000 OHM/VOLTMETER WITH RESPECT GND
2) ALL RESISTORS 1/4 WATT UNLESS OTHERWISE SPECIFIED
3) ALL DIODES FDH 999 UNLESS OTHERWISE SPECIFIED

REV.	SUBJECT		DATE	CKD
ISSUED	DATE	BY	USED ON:	
DRAWN	20-5-80	A Gandelli		
CKD	24-5-80			
APPRVD				

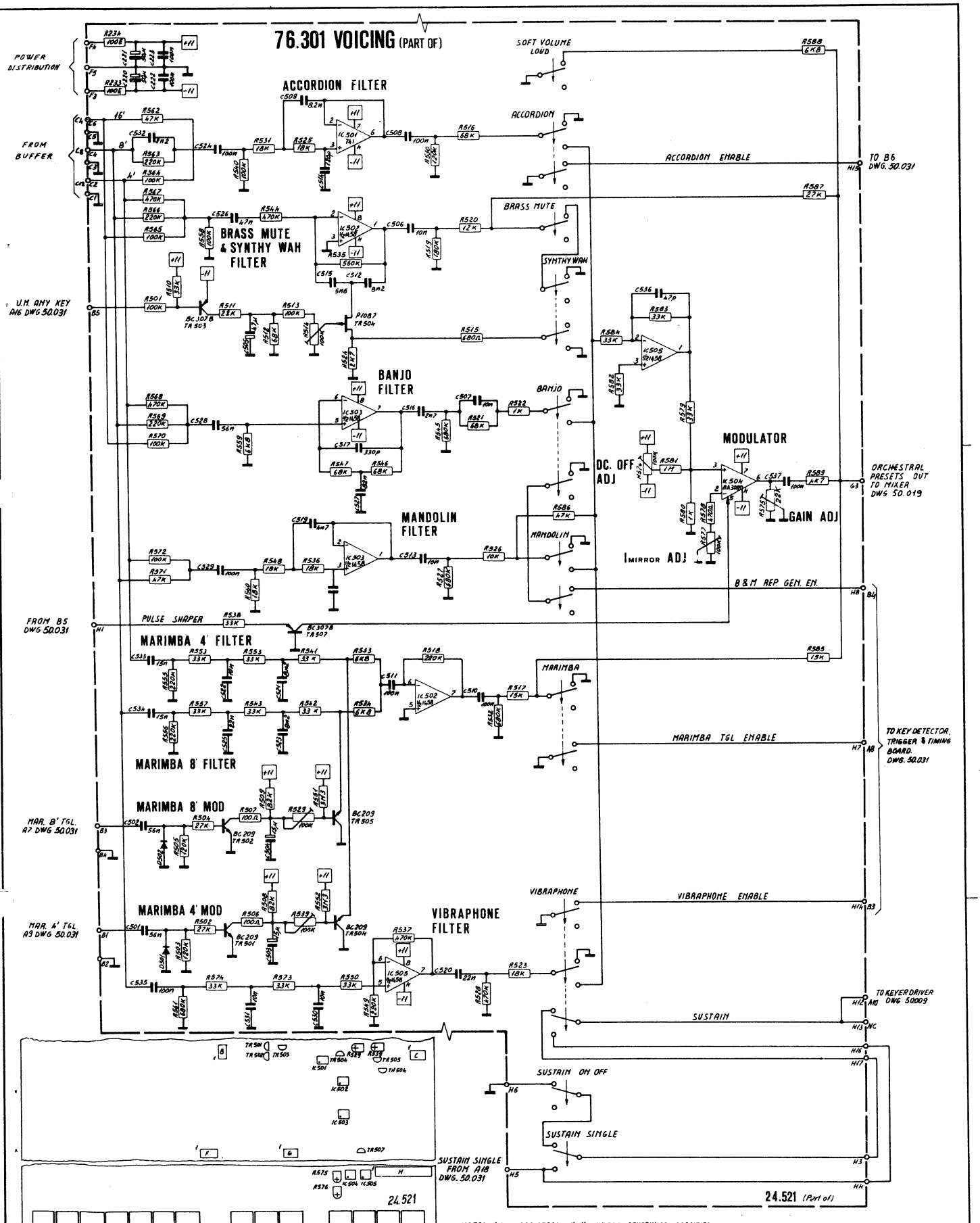
DDR MONDAINO (FO)

Nº. 50031

REPLACED BY

REPLACING

SCHEMATIC DIAGRAM: KEY DETECTOR, TRIGGER & TIMING



NOTES: 1) ALL RESISTORS ¼W UNLESS OTHERWISE SPECIFIED
2) ALL VOLTAGES MEASURED WITH 20.000 OHM/VOLT METER WITHOUT SIGNAL WITH RESPECT TO GND
3) ALL DIODES FDH 999 UNLESS OTHERWISE SPECIFIED

ISSUED	DATE	BY
DRAWN	21·5·80	
CKD	22·5·80	
APPRVD		

USED ON:

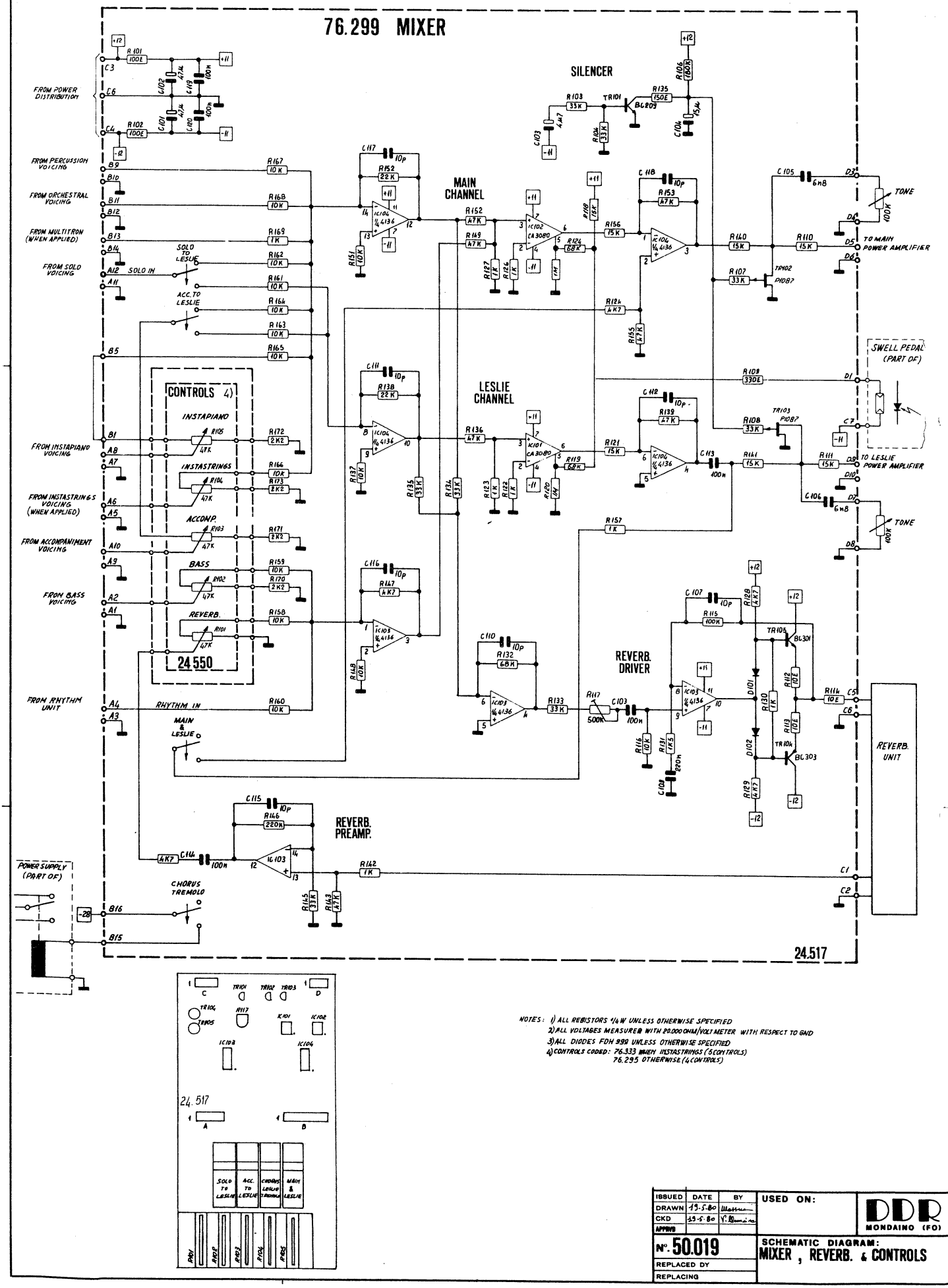
DDR MONDAINO (FO)

Nº. 50.029

REPLACED DY

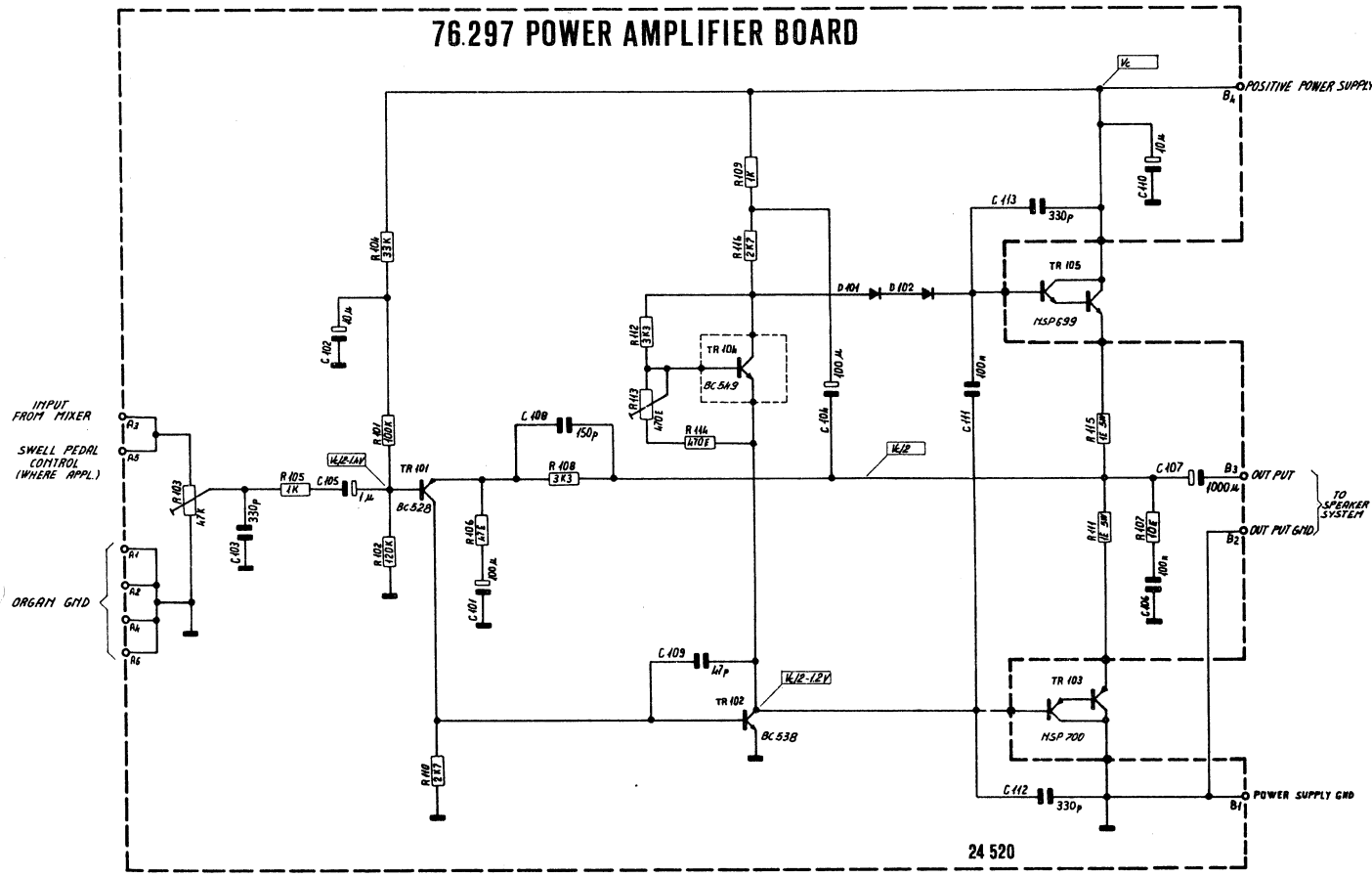
REPLACING

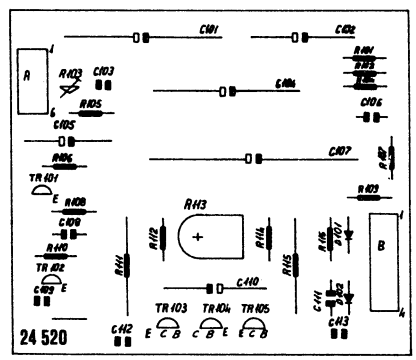
SCHEMATIC DIAGRAM: ORCHESTRAL PRESETS VOICING



ISSUED	DATE	BY	USED ON:	DDR MONDAINO (FO)
DRAWN	15-5-80			
CKD	15-5-80			
APPRVD				
Nº. 50.019			SCHEMATIC DIAGRAM: MIXER , REVERB. & CONTROLS	
REPLACED BY				
REPLACING				

76.297 POWER AMPLIFIER BOARD





NOTES: 1) ALL RESISTOR ¼ W UNLESS OTHERWISE SPECIFIED

2) ALL VOLTAGES MEASURED WITH 20.000 OHM/V VOLTMETER WITH RESPECT TO GND WITHOUT SIGNAL

3) ALL DIODES FDH 999 UNLESS OTHERWISE SPECIFIED

ISSUED	DATE	BY
DRAWN	5-5-80	
CKD	5-5-80	
APPRVD		

USED ON:

DDR MONDAINO (FO)

Nº. 50.001

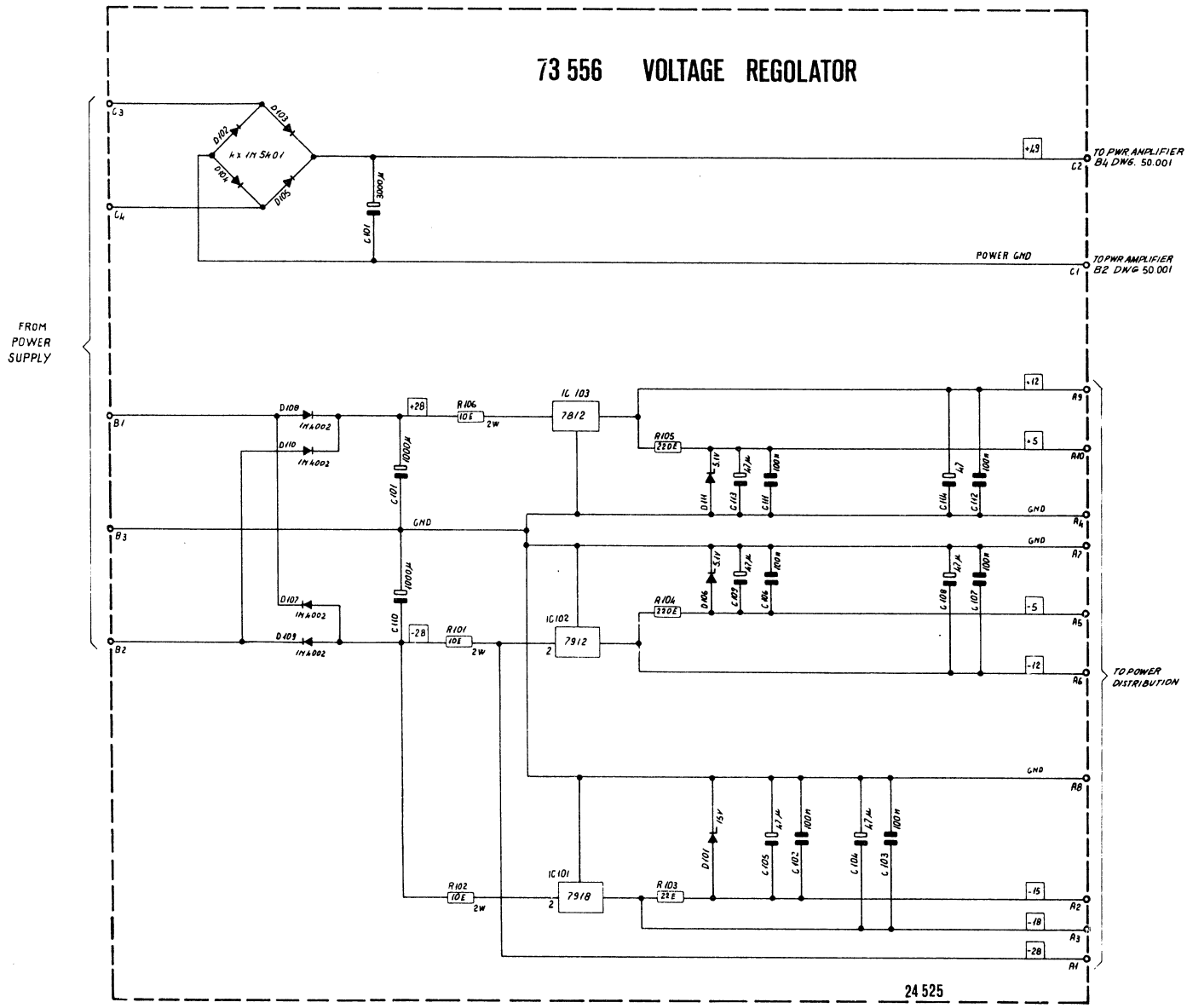
SCHEMATIC DIAGRAM:

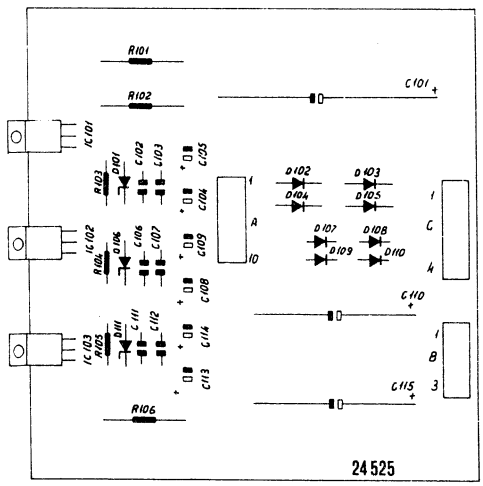
73.028 POWER AMPLIFIER

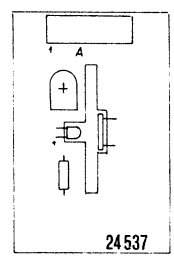
REPLACED DY

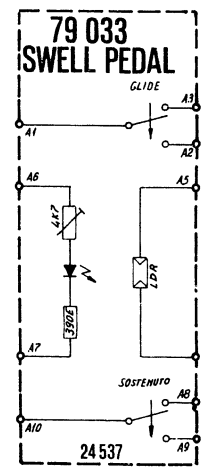
REPLACING

73 556 VOLTAGE REGOLATOR





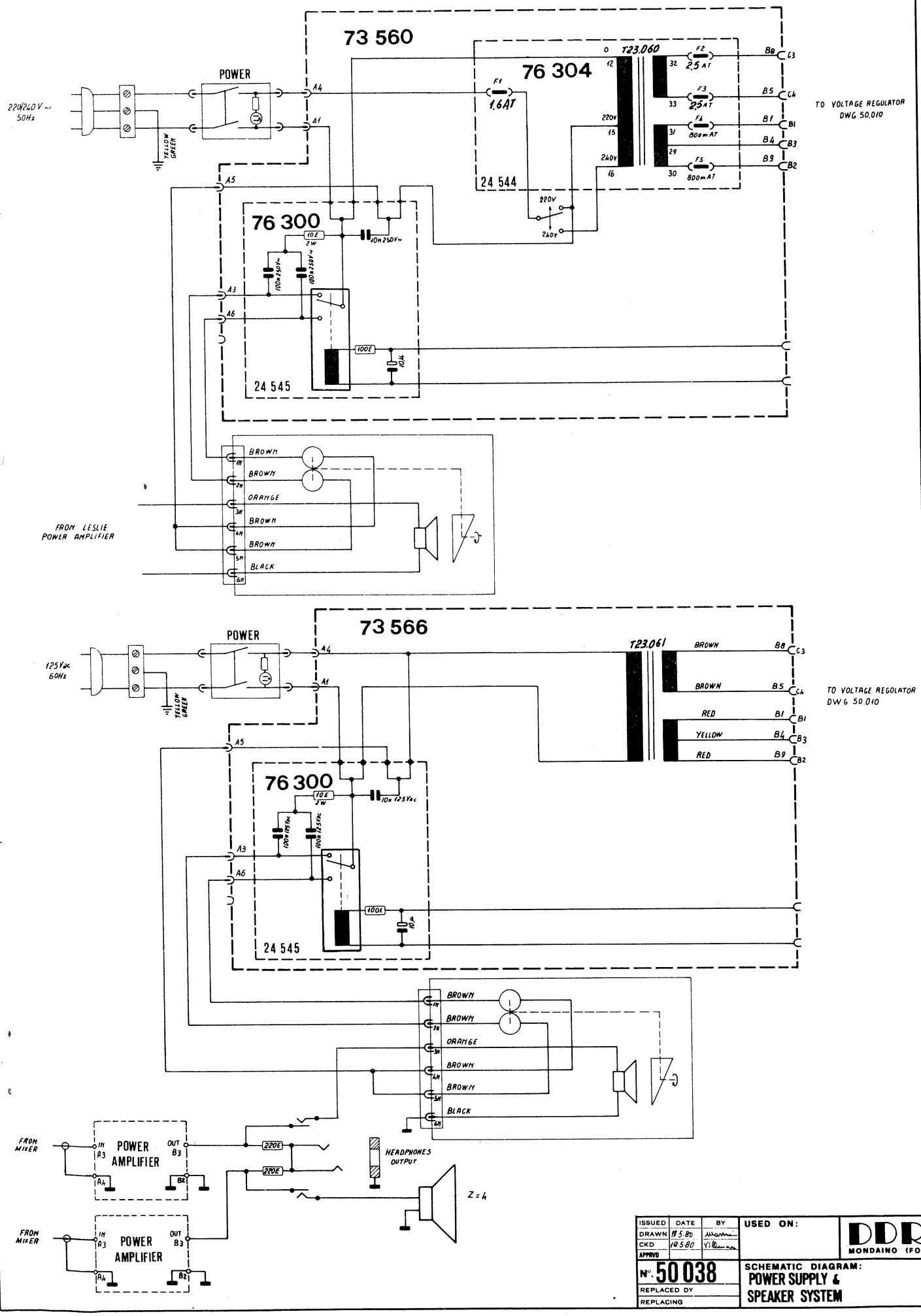




NOTES: 1) ALL RESISTORS ARE ½ W ± 10% UNLESS OTHERWISE SPECIFIED
2) ALL VOLTAGES MEASURED WITH 20.000 OHM/VOLT METER WITHOUT SIGNAL WITH RESPECT TO GND

ISSUED	DATE	BY	USED ON:-
DRAWN	13-5-80		
CKD	13-5-80		
APPRVD			
N°. 50 010			SCHEMATIC DIAGRAM: VOLTAGE REGULATOR & SWELL PEDAL
REPLACED BY			
REPLACING			

DDR MONDAINO (FO)



ISSUED	DATE	BY
DRAWN	19.5.80	
CKD	19.5.80	
APPRVD		
REPLACED DY		
REPLACING		

USED ON:

DDR MONDAINO (FO)

Nº. 50 038

SCHEMATIC DIAGRAM: POWER SUPPLY & SPEAKER SYSTEM

INDEX

PAGE	D.W.G.	DESCRIPTION	P.C. BOARD	PART CODE	PART LIST PAGE	LAY OUT PAGE
1	50.016	H 1000, H 2000 BLOCK DIAGRAM				
2	50.007	MASTER OCTAVE GENERATOR	24.483	74.260		
3	50.008	L.M. GENERATOR				
		frequency dividers	24.451	84.017		
		l.m. organ switchboard	24.486	81.024		
4	50.009	KEYER DRIVER	24.504	74.022		
5	50.004	ORGAN/PIANO KEYER	24.501	74.576		
		keyer timing	24.502	74.573		
		" "	24.502	74.574		
		" "	24.502	74.575		
		U.M. ORGAN SWITCHBOARD	24.486	81.030		
6	50.005	BUFFER	24.503	74.023		
7	50.011	PEDAL GENERATOR				
		pedal generator & rhythm				
		master octave generator	24.510	74.021		
		pedal switchboard	24.551	79.034		
8	50.028	ACCOMPANIMENT & PEDAL VOICING	24.521	76.301		
9	50.030	SOLO, SECOND PERCUSSION & PIANO VOICING	24.521	76.301		
10	50.031	KEY DETECTOR, TRIGGER & TIMING	24.472	76.302		
11	50.029	ORCHESTRALS PRESETS VOICING	24.521	76.301		
12	50.019	MIXER & REVERB.	24.517	76.299		
		CONTROLS	24.550	76.295		
13	50.001	POWER AMPLIFIER		73.028		
		board	24.520	76.297		
14	50.010	VOLTAGE REGULATOR	24.525	73.556		
		SWELL PEDAL		79.033		
		board	24.537	76.293		
15	50.038	POWER SUPPLY (220-240 V~)		73.560		
		fuseholder board	24.544	73.304		
		leslie control	24.545	76.300		
		POWER SUPPLY (125 Vac)		73.566		
		leslie control	24.545	76.300		
		SPEAKER SYSTEM				

ISSUED	DATE	BY
DRAWN		
CKD		
APPRVD		

N 50.037

REPLACED BY

REPLACING

USED ON:

DDR MONDAINO (FO)

SCHEMATIC DIAGRAM:

MASTER INDEX